

**PUBLIC VERSION**

**UNITED STATES DISTRICT COURT  
FOR THE EASTERN DISTRICT OF TEXAS  
MARSHALL DIVISION**

HEADWATER RESEARCH LLC,

Plaintiff,

v.

SAMSUNG ELECTRONICS CO., LTD. and  
SAMSUNG ELECTRONICS AMERICA,  
INC.,

Defendants.

Case No. 2:22-cv-00422-JRG-RSP

**JURY TRIAL DEMANDED**

**PLAINTIFF HEADWATER RESEARCH LLC'S MOTION TO EXCLUDE OR STRIKE  
CERTAIN REBUTTAL EXPERT OPINIONS OF SARAH BUTLER**

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## **I. Introduction**

Headwater seeks to exclude two aspects of Samsung's survey expert Sarah Butler's testimony: (1) her "preference share" simulation and comparison of its results to one of Samsung's own surveys, and (2) her speculative, unsupported opinions concerning the state of mind of survey respondents concerning their alleged viewpoints on various issues related to mobile phone batteries.

First, Ms. Butler undertakes an analysis comparing data resulting from the survey of Headwater's survey expert Dr. Andreas Groehn to a Samsung survey that appears to relate options for various smartphone features to increases or decreases in market share. This requires that Ms. Butler convert the data resulting from Dr. Groehn's survey using a "preference share" simulation. However, this "preference share" analysis is based on an unknown methodology, because Ms. Butler simply cannot explain how she calculated the "preference shares" in her own data. Notably, in her analysis, which, purports to use the data from Dr. Groehn's survey, there is an unidentified entity that receives a "share" in addition to Samsung, Apple, and Motorola—but it is undisputed that there are no data for other entities in Dr. Groehn's data aside from Samsung, Apple and Motorola. Her comparison of her unreliable "preference shares" to Samsung survey data is flawed for the additional reason that Samsung has produced only a high-level summary of this survey, and apparently has not retained any record of the survey design, questions asked, resulting data, or analysis. As a result, Ms. Butler does not know how the Samsung data is calculated, what the underlying market share assumptions are, and how those compare to her "preference shares" and any assumptions that went into her simulation. Because her "preference share" analysis is based on unreliable, unknown methodologies, it therefore cannot assist the trier of fact in deciding any issue in this case. Exclusion under *Daubert* is warranted.

Second, Ms. Butler offers numerous speculative opinions concerning the state of mind of survey respondents concerning mobile phone battery issues. She opines that survey respondents would have conflated battery life (defined in the survey as “the length in time in hours that a device can operate under battery power after being fully charged”) with the size of the battery and the lifespan of the battery. She also opines that survey respondents would value battery life less if device charging time is short, and that they would have valued a feature that saves power while a phone is idle less than a feature that saves power while a phone is in active use. Ms. Butler is not an expert in the marketing of smartphones and has little experience even in surveys relating to smartphones. And she offers no evidence in support of these speculative conclusions, which are contrary to evidence she presents, other evidence in the case, and her deposition testimony. Exclusion under *Daubert* is warranted for each of these opinions because they are unsupported by any facts or data.

## **II. Legal Standards**

Federal Rule of Evidence 702 requires that expert testimony “is based on sufficient facts or data,” “is the product of reliable principles and methods,” and “reflects a reliable application of the principles and methods to the facts of the case.” Fed. R. Evid. 702. “This entails a preliminary assessment of whether the reasoning or methodology underlying the testimony is scientifically valid and of whether that reasoning or methodology properly can be applied to the facts in issue ... Ordinarily, a key question to be answered in determining whether a theory or technique is scientific knowledge that will assist the trier of fact will be whether it can be (and has been) tested.” *Daubert v. Merrell Dow Pharms., Inc.*, 509 U.S. 579, 592-93 (1993).

In addition, an expert’s opinions must also be based on “more than subjective belief or unsupported speculation.” *Id.* at 592. “An absence of information is not a license to speculate”; rather, expert opinions must be “supported by sufficient facts or data.” *Metaswitch Networks Ltd.*

*v. Genband US LLC*, No. 2:14-cv-744-JRG-RSP, 2016 WL 874775, at \*3 (E.D. Tex. Mar. 7, 2016) (quotation marks omitted).

**III. Ms. Butler’s opinions concerning her “preference share” simulation should be excluded because they are rooted in an unreliable and unexplained methodology.**

In her report, Ms. Butler describes a simulation she performed in order to compare Dr. Groehn’s survey results with those from an unrelated survey that Samsung performed years earlier. Ex. 1 (Butler Report) ¶¶85-87. She claims she “used Dr. Groehn’s data to simulate preference shares that would be comparable for the varying levels of ‘battery life’” that he tested in his survey. *Id.* ¶86. She further claims this analysis “estimates the gain in preference share Samsung would experience if Battery Life increased by 5 percent or 10 percent.” *Id.* She then presents the “results” of her simulation in Table 4 of her report, and compares these “results” to data from the unrelated survey conducted by Samsung. *Id.* ¶87.

Ms. Butler’s “preference share” calculations and comparison of them to Samsung data rely on unreliable methodologies for at least two reasons. First, she cannot explain why an additional “competitor” other than those shown in Dr. Groehn’s survey is included in her simulation. Table 4 in her report, like Dr. Groehn’s survey and underlying data, only lists Samsung, Motorola, and Apple. *Id.* ¶87. However, the underlying data that she produced with her report tell a different story. The “Battery Life” tab of her underlying data is provided concurrently with this brief as Exhibit 2. For each product configuration listed in this tab, it is undisputed that “My Product” corresponds to the Samsung Galaxy S24, “Competitor 1” corresponds to the 2023 Motorola Edge, and “Competitor 2” corresponds to the Apple iPhone 15. Ex. 2 at 1; Ex. 3 (Butler Depo.) at 98:24-99:11, 101:23-103:11. But there is additionally a mysterious “Competitor 3” that has a portion of the preference share assigned to it for each product configuration shown. Ex. 2 at 1. At her deposition, Ms. Butler was unable to identify who Competitor 3 is or what the preference shares

assigned to it corresponded to. Ex. 3 at 103:12-104:6, 110:7-9. Notably, she also failed to include the Competitor 3 preference share in Table 4, which summarizes her “results.” Ex. 1 ¶87. Without knowing what Competitor 3 is or what the preference shares assigned to it even mean, it is impossible to understand the methodology she is applying here, rendering it unreliable and unhelpful to the trier of fact.

Second, she is also unable to explain how Samsung arrived at the values (Ex. 4 at 544416) to which she compares her preference share “results”:

Q. ... Do you know if there's some measure of actual market share in the real world that's used in computing the numbers in the total sample column [in Ex. 4 at 544416]?

A. I'd have to go back and look at the description. I believe -- I believe it says it integrates historical data. Um, but if you're asking exactly how these numbers are calculated, I think, as I even indicate in my report, that, I don't know.

Q. So you don't know what historical data may be used in computing these numbers?

A. I'd have to go back and look through all the slides. I don't think -- again, if you're asking exactly how these numbers are calculated, I think, as I certainly point out in my report, that, I'm -- I'm not aware of exactly how these calculations are derived.

Ex. 3 at 40:12-41:3. This is unsurprising since Samsung only produced a PowerPoint presentation that summarizes what appears to be a small portion of the survey results, and not any underlying data that was generated in conducting and analyzing the survey. *See id.* at 31:1-32:1 (Ms. Butler describing the type of documents, including data files, that she would expect to be generated when a conjoint survey is conducted). Moreover, another of Samsung's experts Philip Kline testified that the source of the market share data used in these calculations in this Samsung document are reflected on page 22 (5444408) of Exhibit 4. Ex. 5 (Kline Depo.) at 79:17-81:4. [REDACTED]

[REDACTED]

[REDACTED] Since she did

not know what market share data the Samsung calculations used, she of course offers no explanation for this discrepancy.

In short, Ms. Butler's calculations contain mysterious unexplained data, indicating her results are obtained using a methodology that is unknown even to her. She then compares the result of those dubious calculations to the results of certain calculations done by Samsung, despite not knowing the inputs to those Samsung calculations or how those numbers were calculated. This does not reflect a reliable methodology tied to any facts or data, and thus cannot assist the trier of fact in evaluating any issue in the case. Ms. Butler's preference share analysis must be excluded under *Daubert*.

**IV. Ms. Butler's speculation concerning survey respondents' alleged assumptions should be excluded as unsupported by any facts or data.**

Throughout her report (and at her deposition), Ms. Butler offers speculative, unsupported opinions concerning the state of mind of survey respondents and what they assumed as smartphone users and consumers. As an initial matter, Ms. Butler is a survey expert; she is not an expert in smartphone features or how those features are marketed to consumers. She even has little experience in surveying smart phone users, having only conducted one smartphone conjoint survey herself. *See* Ex. 3 at 59:5-60:13, 160:17-161:1. Ms. Butler therefore does not have any particular experience or expertise that would inform her about how smartphone users and consumers would or would not read survey questions. But in any event, the four opinions discussed below are all unsupported by any facts or data, and evidence of record also contradicts her unsupported suppositions.

First, she opines that “[a]bsent seeing battery capacity [in Dr. Groehn’s survey], ... respondents would have assumed that an improvement in battery life also meant a bigger or better battery capacity.” Ex. 1 ¶48; *see also id.* ¶¶10, 49, 51, 56. She cites no evidence in support of this



conclusion. Rather, evidence she does cite indicates that better battery life can be achieved using both “software-based optimization” and “jamming absolutely massive batteries in[to] phones” (increasing battery capacity)—i.e., that increased battery capacity is just one way to increase battery life, not that battery capacity and battery life were one and the same, or that an increase in battery life means battery capacity was increased. *Id.* ¶50. Critically, she admitted at her deposition that she does not have “any specific evidence as to consumers’ preferences for a particular means in which longer battery life is achieved.” Ex. 3 at 36:19-37:15; *see also id.* at 72:3-73:3. Ms. Butler’s speculative “battery capacity” opinions in her report, which run counter to her own cited evidence and deposition testimony, should be excluded as unsupported by any facts or data in the case.

Second, she also opines that “respondents may have assumed that an improvement in battery life meant the battery would last a longer time over the life of the smartphone.” Ex. 1 ¶48; *see also id.* ¶¶10, 49. She also provides no evidence that respondents would have understood “battery life” in the conjoint survey to be at all related to lifespan of the battery component, particularly where the survey defined “Battery Life” as “the length in time in hours that a device can operate under battery power after being fully charged.” Ex. 6 (Groehn Amended Report) ¶88 (Figure 17). Tellingly, she testified at deposition that she did not know if there was a relationship between how Dr. Groehn defined battery life and the lifespan of the battery. Ex. 3 at 58:18-25. Moreover, one of Samsung’s other experts Mr. Kline disagrees with her conclusion that respondents may somehow equate battery life with battery lifespan. Ex. 5 at 86:25-87:18. Ms. Butler’s “battery lifespan” opinion should also be excluded as nothing more than unsupported speculation.

Third, she opines that “the value attributable to a small increase in battery life may decline if the time it requires to charge the device is short.” Ex. 1 ¶50; *see also id.* ¶51. She cites no evidence in support of this speculative conclusion. Rather, the evidence she does cite in Figure 5 supports the opposite conclusion. *See id.* ¶50 (“[I]f you spend most of your time at home or the office, fast charging shouldn’t be your priority when you are in the market to buy a new phone.”); *id.* (“[I]f you don’t upgrade your phone very often, a physically bigger battery ... and ‘normal’ charging speed will serve you for more years than a phone with a [smaller] battery and [faster] charging.”); *id.* (“[N]ot many will purchase [a phone] purely for its crazy charging speeds, but the good news is that even the ‘slower’ charging phones are just about fast enough for today’s market.”). Moreover, the evidence cited states that “fast charging” does not equate to the length of time to charge the device as she claims, but rather “the maximum wattage at which these phones can charge.” *Id.* She also admitted at her deposition that she had no evidence about how many, if any, of the survey respondents would be impacted by her “fast-charging” theory. Ex. 3 at 71:15-72:2. Ms. Butler’s “fast-charging” opinions should be excluded as unsupported speculation that is inconsistent with the facts of the case.

Finally, she also speculates that survey respondents could have “assumed that they would experience the battery savings when [actively] using the smartphone as well as when the smart phone was not in use, which appears not to be the case, at least for the Doze mode feature. Knowing that the increases only occur when the smartphone is not in use likely would have decreased the value attributed to the feature.” Ex. 1 ¶60. She again admits that she offers no evidence in support of this conclusion. Ex. 3 at 82:2-83:20 (“[D]o you have any evidence that consumers value the Doze feature less than other ways to increase battery life? A. No.”). Her opinions related to how

respondents may (or may not) view how the Doze feature increases battery life should likewise be excluded as nothing more than unsupported speculation.

**V. Conclusion**

For the foregoing reasons, Headwater respectfully requests that the Court exclude or strike the portions of Ms. Butler's opinions that concern her "preference share" analysis and her speculative, unsupported conclusions concerning the state of mind or assumptions of survey respondents.

Dated: May 16, 2024

Respectfully submitted,

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**CERTIFICATE OF SERVICE**

I hereby certify that on May 16, 2024, I electronically filed the foregoing document with the Clerk of the Court for the Eastern District of Texas using the ECF System under seal, and served defendants with a copy via electronic mail.

/s/ Marc Fenster  
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**CERTIFICATE OF CONFERENCE**

I hereby certify that counsel for Headwater has complied with the meet and confer requirement in Local Rule CV-7(h) by meeting and conferring with counsel for Defendants on May 9, 2024. For Headwater, Kristopher Davis, James Tsuei, and Jason Wietholter of Russ August & Kabat LLP attended the conference. For Samsung, Sara Fish, Thad Kodish, and Jared Hartzman of Fish & Richardson P.C. attended the conference. Plaintiff explained the basis for its proposed motion to exclude or strike, and Defendants explained why they believe the motion lacks good cause. The parties could not reach an agreement, and discussions have conclusively ended in an impasse, leaving an open issue for the Court to resolve. Defendants oppose this motion.

/s/ Marc Fenster  
Marc Fenster

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]